

US Pixel Planning for 2017

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Today:

- Collect information on what we want to accomplish
- Collect information on what parts are available and what people need
- Determine what is missing

- Pixel TDR set to circulate to ATLAS in October 2017
- RD53A modules are not expected until Fall 2017 (if lucky)
- Majority of 2017 effort will involve RTI modules and dummy modules

Milestones:

- **Validation of RTI modules**
 - Test beam
 - Irradiations
 - HALT tests
- **Stavelette setup (Inner layers)**
 - Electrical tests of multiple modules on a stave
 - Test as many components as possible
 - Twinax cables (connectors?)
 - LV serial power
 - HV serial power?
 - Stave flex cable??
 - Quad module flex cable
- **Module Assembly/Test/Loading Procedure Proposal** (dependent on ATLAS approval)
 - FE chip tests
 - Module + flex assembly
 - Define test procedures
 - Stave loading
- **Other?? Please provide your input!!**

What is needed to complete goals?

Dummy modules

- 35 with unloaded flex are expected from SLAC
- 55 loaded flex are expected from ANL

RTI Modules

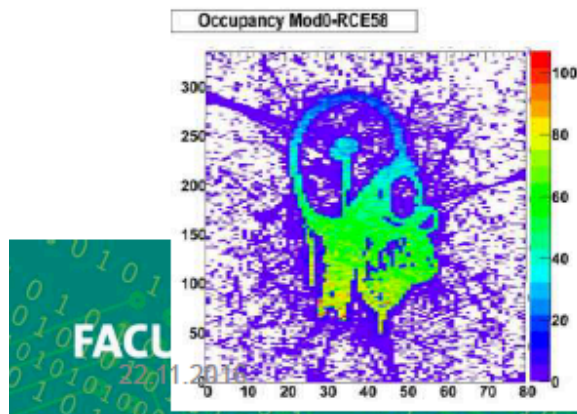
- 1? on single chip board at SLAC
- 1 on single chip board at ANL
- 4? On single chip board at LBNL
- Is that all?
- How many more are we expecting?

Fermilab test beam: <http://ftbf.fnal.gov/>

- Test Beam Feb 22 to March 14
 - Investigating the possibility to extend until April 25
 - University of Geneva will bring their telescope
 - Test HVCMOS sensors
 - Nominal beam 60 GeV pions for most of running
- Test RTI modules
- Or anything else you are interested in
 - LGAD, HVCMOS,

The (Geneva) FEI4 Telescope at SPS

- Telescope:
 - - 6 planes of silicon pixel sensors
 - - ~27000 pixels (250x50 μ m,) per plane
 - - Spatial resolution: 12 x 8 μ m,
 - - Trigger rate: 6 - 18kHz
 - - Custom Data Acquisition System
 - - Custom C++ Analysis framework
 - Customizable ROI !
 - Services:
 - Low and High Voltage
 - Power supplies
 - Cooling and environmental monitoring
 - Scanning stages
 - Remote control and monitoring
- <https://arxiv.org/abs/1603.07776>



CMOS Meeting

Backup